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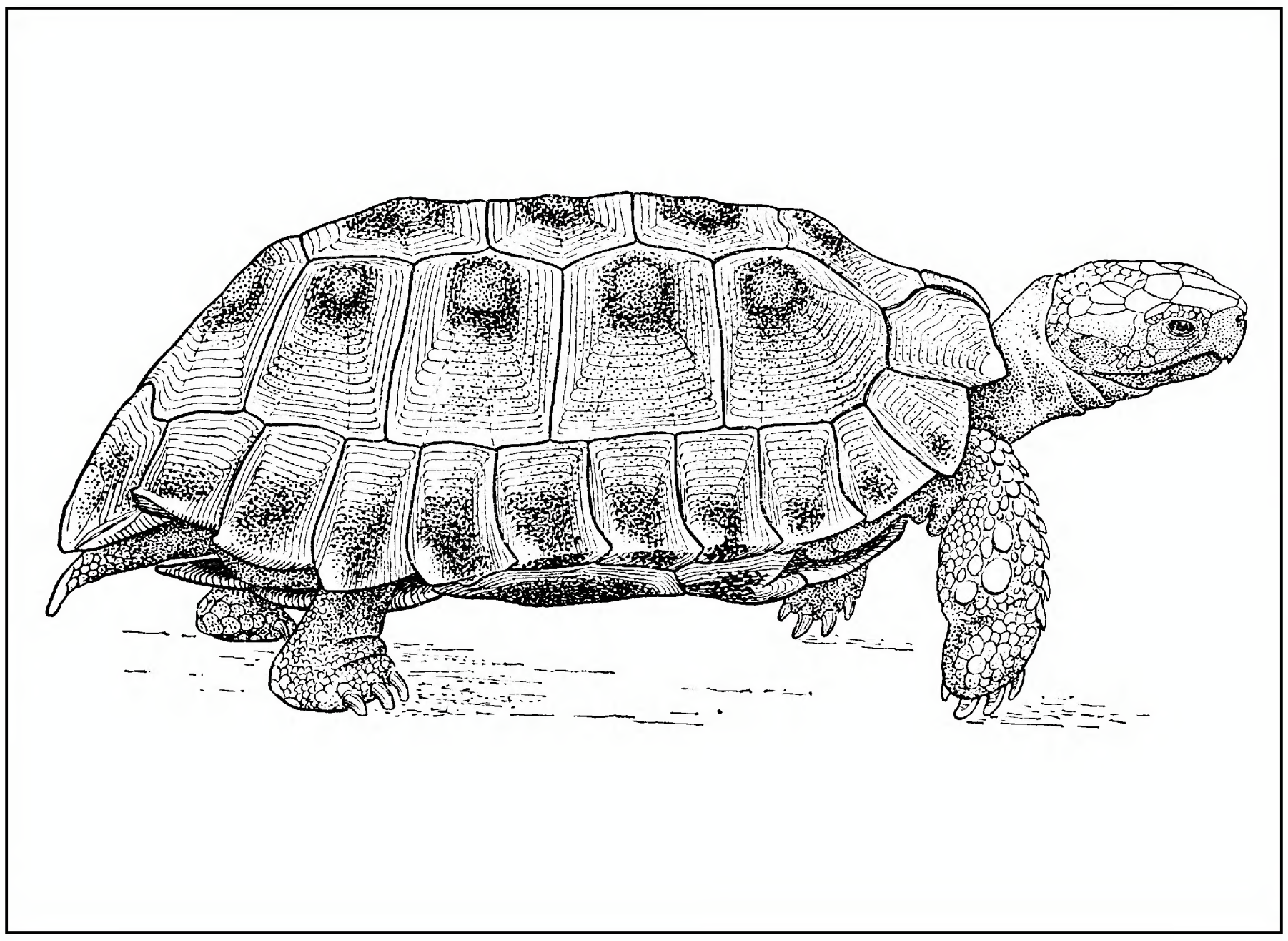

BULLETIN OF THE CHICAGO HERPETOLOGICAL SOCIETY
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From Snake Hunter to Bat Scholar: Arthur M. Greenhall (August 6, 1911 – April 8, 1998)

Raymond Novotny
Ford Nature Center, Mill Creek MetroParks
840 Old Furnace Road
Youngstown, OH 44511
E-mail: raynovotny@yahoo.com

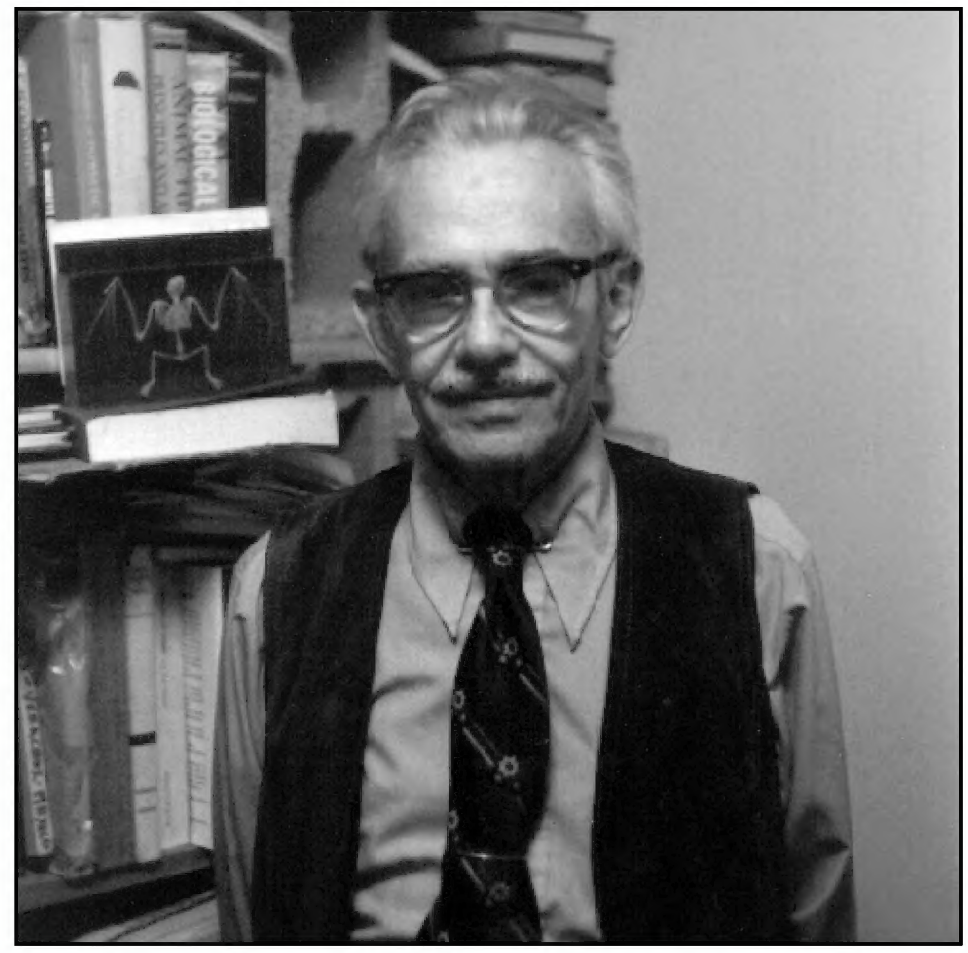
Would you want to stomp through the tropics with Raymond L. Ditmars, the famous Curator of Reptiles at the New York Zoological Society's Bronx Zoo? During his late teens and early twenties, Arthur Greenhall did just that, a unique experience that was the beginning of a long and productive career in zoology.

Art developed a passion for natural history and zoology at a young age and once claimed that he had learned to read by using Ditmars' classic, *The Reptile Book*. While still a New York City high school student, he finally met in Ditmars in 1927, after having "bombarded him [Ditmars] with fan letters which he answered." Immediately after receiving that first reply he took his copy of "the bible" to the zoo for autographing. As was Ditmars' custom with his legion of admirers, he treated the young man with kindness and provided encouragement to which the teenager responded by visiting his idol at the zoo *several* times *every* week until graduating from high school in 1930.

Young Greenhall, of course, wanted to follow in the footsteps of his hero, who was self-taught, so Ditmars wisely suggested he enroll at the University of Michigan, then, and still, a center of academic herpetology. This formal study gave Art an excellent foundation for his future pursuits, and while there he served as a teaching assistant to Dr. Frank Blanchard, the noted herpetologist, in Blanchard's courses in Ornithology and Natural History of Vertebrates (the latter considered to be the best of its kind in the nation).

Ditmars always financed his expeditions with his personal funds and Greenhall too somehow managed to save enough money to travel along with him during summer vacations. Their adventures took them to the tropics in the Caribbean, and Central and South America, in search of snakes for the Bronx Zoo, and if their primary target was difficult to find, they would switch to another group, be it even lowly grasshoppers. Greenhall's experiences with Ditmars in Trinidad in search of the elusive bushmasters and vampire bats are recorded splendidly in a book, *Snake Hunters' Holiday*, by Ditmars and William Bridges. In fact, Bridges highlights Art's escapades and labels him, "the snake hunter."

While trekking through Panama in 1933, Ditmars and Greenhall captured the first vampire bat to be exhibited alive in the United States. This event inspired Art's interest in mammalogy and the topic for his master's thesis at Michigan:



vampire bats. Ditmars also urged Art to forge ahead with his own career, and gradually the student's focus did shift from herpetology to mammalogy, specifically bats, paralytic rabies and its effects in wildlife and humans, and folklore. Art maintained these interests for the rest of his life.

Art later attended Columbia and New York Universities, and despite the interruption of World War II completed all of his course work for a doctorate. His fine education, his field experience with Ditmars, and his volunteer work at the Bronx Zoo helped lead to Art's being employed as the director of the Portland Zoo (1942–46) and the Detroit Zoo (1946–53). He despised the cold winters of the north, however, and longed for a position in the tropics. Fortunately for him, his hard work, impeccable credentials, and ongoing communications with Ditmars through the years resulted in 1953 in a position in Trinidad that spanned a decade. Art's pioneering work there soon evolved into historical literary documents describing the little-known fauna of the country.

In order to support himself and his family, Art worked several jobs simultaneously. Imagine this schedule: Zoologist for the Ministry of Agriculture, Curator for the Royal Victoria Institute Museum and Art Gallery, Director of the Emperor

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Author's note: I am very grateful to Raymond Ditmars for leaving us with thousands of pages documenting his life, work, and travels. However, I still deeply regret that I was not able to interview Arthur Greenhall before his death last year about his first-hand experiences with this legend. Unfortunately, for years, in my mind I had Arthur Greenhall mixed up with Harvard's Arthur Loveridge, the Welsh herpetologist and Africa specialist, who died in 1980. When I finally realized my confusion and sorted the Arthurs out, I was four months too late. The loss is mine.

Valley Zoo, and Consultant Mammalogist to the Trinidad Regional Virus Laboratory of the Rockefeller Foundation and the University of the West Indies.

The Republic of Trinidad and Tobago, about the size of Delaware, supports a diverse array of bats comprising more than 70 species, each documented in the monumental monograph, *A Review of the Bats of Trinidad and Tobago*, co-authored by Greenhall. Returning to the United States in 1963 in the employ of the U.S. Fish & Wildlife Service, Bird and Mammal Labs, Smithsonian Institution, he authored *House Bat Management*, which detailed how to bat-proof a home, and make it energy efficient as well. In 1988, through the book *The Natural History of Vampire Bats*, he fulfilled a long-time goal: to record, in one volume, the advances in knowledge in the many years since his thesis.

Art considered Trinidad and Tobago a virtual naturalist's treasure trove that had been overlooked by the scientific community. Because of their kindred love of wildlife and wild landscapes, his good friend there, Asa Wright, offered to will her cocoa estate in the Arima Valley to him. Art humbly declined but made a suggestion that resulted in the Asa Wright Nature Centre, now a popular destination for eco-tourists. John C. Murphy's new book, *Amphibians and Reptiles of Trinidad and Tobago*, may encourage additional herpetologically oriented people to visit there. Such visitors, as well as local students and naturalists, will soon benefit from the generous bequest Art made upon his death: his huge library will go to the University of the West Indies' St. Augustine Campus. Last summer his family, including Elizabeth, his wife of 56 years, his daughter Alice and son Paul visited Trinidad to scatter their loved one's ashes at the base of Mt. Oropouche on what would have been his 87th birthday, August 6.

While employed at the Toledo Zoo in the early 1930s, Roger Conant met Arthur Greenhall, who was studying in nearby Ann Arbor, Michigan. In Dr. Conant's recently published autobiography he describes Art as "a longtime good friend who reminded him of a dapper Charlie Chaplin." (You can turn to page 426 in that book and read the amusing anecdote, "The Greenhall–Conant Feud.")

Greenhall, in his obituary of Ditmars, wrote, "I cherished his personal guidance and fatherly advice." According the Greenhall family, Raymond Ditmars was both Arthur Greenhall's mentor and his surrogate father. This is easily understood from Greenhall's perspective: after his parent's divorce when he was but three years old and mother's death soon after, he was not permitted contact with his father. But what was the appeal for Ditmars? Although he was the loving and devoted father of two daughters, and the hero for countless boys throughout the United States, perhaps he also yearned for a son, and found that in this special person, Arthur Greenhall.

Raymond Ditmars made his mark in history as the first person to popularize reptiles. He was a prolific author and most of his books are available second hand. Unfortunately, *Snake Hunters' Holiday* is probably his most difficult to find title. Thankfully, some large libraries still hold it in their collections and there is always interlibrary loan. It is worth the search, for as a *New York Times* reviewer wrote, "Dr. Ditmars is as effective in his handling of language as he is skillful in his handling of snakes. . . ."

Although all of the distinguished characters in this book are now gone, their adventures are still available at the turn of a page. Treat yourself sometime to a visit back to a time more than a half century ago, and search for deadly serpents and vampires in the American tropics with Raymond Ditmars and his "only son" Arthur.

Selected Publications of Arthur Greenhall

1932. de Sola, C. Ralph, and Arthur Greenhall. Two species of terrapin in Cuba: The Antillean terrapin *Pseudemys rugosa*, and the Cuban terrapin, *Pseudemys decussata*. Copeia 1932(3):129-133.

1935. Ditmars, Raymond L., and Arthur Greenhall. The vampire bat: A presentation of undescribed habits and a review of its history. Zoologica 19(2):53-75.

1936. Greenhall, Arthur M. The care of the bushmaster and certain lizards in the New York Zoological Park. Copeia 1936(1):171.

1936. Greenhall, Arthur M. A cannibalistic hog-nosed snake. Copeia 1936(3):171.

1954. Greenhall, Arthur M. Sounds of animals. Audible communication of animals. (Recorded at the Detroit Zoological Park, Michigan). Folkways Records, Album No. LP-FPX 124 (Science Series) New York. [Now available on cassette].

1965. Greenhall, Arthur M. Trinidad and bat research. Natural History 74(6):14-21, June-July.

1961. Goodwin, George G., and Arthur M. Greenhall. A review of the bats of Trinidad and Tobago: Descriptions, rabies infections, and ecology. Bulletin of the American Museum of Natural History 122:187-302.

1973. Greenhall, Arthur M. Indiana bat: A cave-dweller in trouble. National Parks and Conservation Magazine 47(8): 14-17, August.

1982. Greenhall, Arthur M. House bat management. U.S. Fish and Wildlife Service, Resource publication No. 143.

1988. Greenhall, Arthur M., and Uwe Schmidt, editors. The natural history of vampire bats. Boca Raton, FL: CRC Press.

Acknowledgments

I would like to thank the family of Arthur Greenhall, especially his son Paul, and Roger Conant for their interest in and assistance with this article.

References

Allen, F. A. 1935. Snakes—Dr. Ditmars. The New York Times Book Review. October 20, 1935, p. 25.

Conant, R. 1997. A field guide to the life and times of Roger Conant. Provo, UT: Selva.

Ditmars, R. L., and W. Bridges. 1936. Snake hunters' holiday: Tropical adventures in search of bats and the bushmaster. New York: D. Appleton-Century Co.

Gloyd, H. K. 1940. Frank Nelson Blanchard, Scholar and Teacher. Herpetologica (1)8:205.

Greenhall, A. M. 1942. Raymond L. Ditmars (1876-1942). Herpetologica 2(5):81-82.

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Book Review: *Amphibians and Reptiles of Northern Guatemala, the Yucatán, and Belize* by Jonathan A. Campbell. Univ. of Oklahoma Press, Norman, OK. xix + 380 pp. Animal Natural History Series, Volume 4. Hardbound $100.00, 1998. Softbound $29.95, 1999.

Ernest A. Liner
310 Malibou Boulevard
Houma, LA 70364-2598
E-mail: eliner@mobiletel.com

Amphibians and Reptiles of Northern Guatemala, the Yucatán, and Belize begins with the Contents and a List of Illustrations. The illustrations comprise a topographic map, charts of mean monthly temperature and precipitation, a map showing vegetation zones, six photographs of habitat scenes, four figures depicting external morphological features, and 176 color plates of the fauna which for the most part are excellent. The color photographs are six to a page except that the last two pages have four each of the same size as the previous ones. Photos are to the species and whenever subspecies exist it is not stated which is used but at least a catalog number and locality is listed and with some ferreting the subspecies involved could be determined. Following the List of Illustrations is the Preface and Acknowledgements and a 23-page Introduction. Accounts of the amphibians fauna are followed by the reptiles. The appendices which are identification keys in both English and Spanish. An excellent nine- page Glossary follows. Twenty-one pages of References are listed followed by a page of Photo Credits and an Index of the common and scientific names of the fauna.

In addition to the scientific name each taxon has a common English and Spanish name. Common names for the most part differ from Liner (1994) and Frank and Ramus (1995). Following this is a general description of the taxon followed by natural history (very brief), distribution, and remarks in most cases. Many accounts have boxed inserts with the author's experiences with collecting certain taxa; this makes for entertaining reading and also in some cases a brief summary of certain attributes such as parthenogenesis, tail-breaking, declining amphibian populations, and mimicry. This reviewer read these before going over the species accounts. Accounts are to the species level only, subspecies (if any) are given in the remarks. It would have been helpful if some characteristics of the various subspecies would have been included. A person working on the species has to go to another source for final determination. The accounts would have been greatly improved if species maps were included, at least for the area covered.

Syrrhopus is used for the single species in the area instead of *Eleutherodactylus*, but in his remarks the author alludes to the fact that all investigators do not follow this change.

This book is excellent for the general reader with an interest in reptiles and amphibians for which it was intended. The quality and content is in keeping with the high standards of the series of which this is the fourth volume. For the specialist it left out a number of things that could have been expanded.

The cost of the hardcover edition is prohibitive to the general reader, but the attractive paperback edition is at a price most can afford. This is a book that I recommend heartily for the generalist and also one that should be in the library of the specialist. This volume could serve as a new starting point for future work in this very interesting area of Latin America. With habitats experiencing rapid anthropogenic changes at least a record is preserved of what was extant.

Literature Cited

Frank, N., and E. Ramus. 1995. A complete guide to scientific and common names of reptiles and amphibians of the world. Pottsville PA: N. G. Publishing Inc.

Liner, E. A. 1994. Scientific and common names for the amphibians and reptiles of Mexico in English and Spanish. Nombres científicos y comunes en Ingles y Español de los anfibios y los reptiles de México. SSAR Herpetol. Circ. 23.

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The Null Hypothesis and the Croaking Anurans of Cyrene

David Chiszar
Department of Psychology, CB 345
University of Colorado
Boulder, CO 80309-0345

Hobart M. Smith
Department of EPO Biology, CB 334
University of Colorado
Boulder, CO 80309-0334

Abstract

Aristotle claimed that no croaking frogs exist in Cyrene (an ancient city in northeastern Libya), an incorrect statement according to modern data. We review this conundrum and suggest three hypotheses to account for it. Regardless of which hypothesis is correct, this case is an excellent example of the costs and benefits of asserting the null hypothesis.

In a previous paper (Chiszar and Smith, 1999) we examined all herpetological assertions made by Aristotle (384-322 BC) in his *History of Animals* (Cresswell, 1878), dividing them into four categories: correct, incorrect, contains both correct and incorrect elements, or contains an assertion that we cannot evaluate or that has not been evaluated by science (insofar as we are aware). Five graduate students studying amphibians and reptiles and two faculty mentors independently categorized each of the 91 herpetological commentaries made by Aristotle. The seven sets of categorizations showed a high degree of concordance, indicating that strong reliability (inter-rater agreement) was associated with our procedure.

Averaging across the seven classifiers, only a mean of 28% (SE = 4.5) of Aristotle's assertions were judged to be unequivocally true. A mean of 19.4% (SE = 3.9) were judged to contain both correct and incorrect components, 16.1% (SE = 4.2) could not be evaluated, and 36.2% (SE = 5.1) were incorrect. Even if Aristotle is given full credit for all comments falling into categories 1–3, his score is only 63.8%, rather a low value in an institutional setting where 60% is the minimum (D) passing score. The critical insight was not that Aristotle was fallible, but rather that the discipline of herpetology has learned a great deal during the last 2,300 years, "and we know a great deal more today than even the greatest human mind knew in the fourth century BC" (Chiszar and Smith, 1999).

The purpose of the present report is to consider a statement by Aristotle that none of the judges could evaluate during our initial study. The statement was: "There are no croaking frogs in Cyrene" (Cresswell, 1878, Book 8, Chapter 27, p. 225). This is typical of Aristotle's prose in that it is straightforward, with no weasel wording or other qualifiers, as are quite common today. Indeed, a modern writer would be forced to say something like: "No calling frogs were heard in Cyrene during our visit, May 10-16, 340 BC." Aristotle wrote as if he was sure of himself, and he can be described as asserting the null hypothesis, a position that any logician, statistician, or scientist would call hazardous. Journal editors and reviewers rarely permit such statements, and for good reason, as they have a high probability of being wrong. Furthermore, some logicians would go farther and argue that we can never prove or confirm, and therefore should never assert, a null hypothesis. Yet, this is exactly what Aristotle did in the statement in question, and we are willing to bet that he understood the logical risks. It seems to us that Aristotle was setting an example: Write clearly, and if the remark is wrong, others will quickly say so. In the case of Cyrene frogs, however, no one has (to our knowledge) commented on Aristotle's accuracy. Now, 2,300 years later, we do so based on the biogeographic analyses of Schleich et al. (1996).

Cyrene is an ancient city in northeastern Libya, within a Mediterranean coastal strip that is part of a larger area called Cyrenaica. At least two anurans occur there, both having broad geographical ranges extending across all or most of North Africa. One is *Bufo viridis* Laurenti, 1768; the other is *Rana saharica* Boulenger, 1913. The systematics of the both species are far from stable, and in both cases it is appropriate to speak of complexes, with the expectation that genetic studies may eventually recognize multiple cryptic species in each. Nevertheless, the two species, sensu lato, as they are mapped by Schleich et al. (1996), occur in the area occupied by ancient Cyrenaica and Cyrene. The males of both taxa call. In *B. viridis* calling occurs in April and May. In *R. saharica* calling also occurs in April and May, but will occur at least sporadically whenever water temperature is above 12°C. Both species are relatively fecund, with female *B. viridis* producing 10,000–20,000 eggs and female *R. saharica* producing 5,000–10,000. Hence, tadpoles and froglets are abundant following the period of courtship and amplexus (all facts from Schleich et al., 1996).

Nevertheless, Aristotle missed both species. He did not describe the time of year that he visited Cyrene, and did not indicate whether the had confirmed his conclusions by talking to other observers. However, we are certain that Aristotle knew about spring breeding of anurans, as he wrote of this in other contexts. Also, we are equally sure that Aristotle would have discussed his views with other persons, as he often spoke of doing this and he was quite explicit about who were reliable observers and who were not to be trusted. Accordingly, it may be assumed that Aristotle conducted his observations in Cyrene during the appropriate season and that he spoke with other people.

How then do we reconcile his conclusion with the unequivocal evidence of Schleich et al. (1996)? One possibility is that neither *B. viridis* nor *R. saharica* occurred in Cyrene during Aristotle's lifetime and are relatively recent invaders of this area. Against this idea is the fact that both species extend from Morocco to well east of Libya into Egypt. *Bufo viridis* also extends north into the eastern Mediterranean rim. *Rana saharica* extends only to extreme northwestern Egypt, but then another species, *Rana levantina*, extends into Israel and Lebanon. The relation between *R. saharica* and *R. levantina* is

unclear, but it is probably the case that the latter is a member of the *R. saharica* complex (Duellman, 1993). Hence, both *B. viridis* and *R. saharica* appear to have had long residences in northeastern Libya, and we feel safe in concluding that they did not race across North Africa only in modern times and were probably in Cyrenaica during Aristotle's life.

A second hypothesis is that the species were present but not detectable during Aristotle's visit and for some years before and after. This could have happened because of an extended drought or for some other equally unfavorable climatic or biological reason, leading observers to conclude that frogs were not present. A third possibility is that a relatively localized extinction of frogs may have occurred in an area that included Cyrenaica, and then some years later, presumably after Aristotle's visit, the area was reinvaded from the west or east or both.

Hypotheses one and three would justify the conclusion that croaking frogs were absent from Cyrene, but only temporarily. Hypothesis two would debunk Aristotle's assertion. All three scenarios reveal the dangerousness of claiming the null hypothesis to be true, and we wonder about the applicability of these ideas to certain contemporary cases of amphibian declines. Hypotheses two and three are probably relatively common phenomena.

References

Chiszar, D., and H. M. Smith. 1999. Aristotle's herpetology. The Celator. In press.

Cresswell, R. (editor and translator). 1878. Aristotle's "History of Animals." London, England: George Bell & Sons.

Duellman, W. E. 1993. Amphibian species of the world: Additions and corrections. Lawrence, KS: The University of Kansas Museum of Natural History, Special Publication No. 21.

Schleich, H. H., W. Kästle and K. Kaisch. 1996. Amphibians and reptiles of North Africa. Königstein, Germany: Koeltz Scientific Books.

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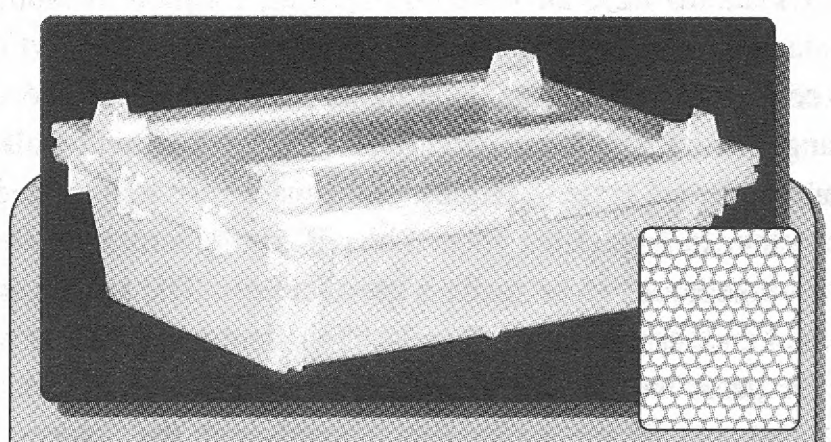

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Herps in Hollywood

by John Kostka

Lake Placid

Well, here it is, folks. The beginning of the herpetological explosion of the next year or two, which includes such original material as giant crocodiles (no less than *three times*!), Komodo dragons, mutant turtles, and killer king cobras and pythons. And many of these movies have some form of talent backing them, such as *Texas Chainsaw Massacre* director Tobe Hooper, along with one of the *Anaconda* writers, Hans Bauer, now getting his *Komodo* script made. It looks like reptiles have hit the big time.

But enough about that. About *Lake Placid*—I must give it the credit it's due: it is, surprisingly, adequate. The movie begins with a fair amount of mood as a wildlife official dives into a huge lake to inspect the beaver population (yeah, right), and is attacked by some monstrous beast (guess what!). He eventually surfaces, screaming, and the local deputy who was with him manages to move their boat over to the hapless victim and haul *half* of him into the boat.

This made most audience members cringe, and some (a man in front of me) hid their faces. But from what I've heard this prompted the quick response of "throw him back" from a few fun-loving CHS members.

A tooth is found embedded in this poor individual, though, and before you know it, a scientist is flown to this rural town in Maine to give a first-hand analysis. After inspecting this tooth in the morgue, she ends up going out to the lake along with the local authorities to conduct an investigation into what this beast might be.

After arriving at the lake, we meet our main source of comic relief, a millionaire named Hector, who supposedly travels the world to swim with crocodiles, and has even survived swimming with Nile crocodiles without so much as a scratch.

The four (scientist, deputy, millionaire, new wildlife official) decide to canoe around the lake, looking for this creature, and, of course, the canoe is flipped over, tossing our hapless heroine and Hector into the water, as scared perch thrash about in front of them. They both manage to escape the unseen menace. Never explained is how exactly it flipped the canoe over by pushing one end up without ever being seen. Odd.

While motor-boating and scouting once again, a moose head is found floating in the water. It ends up being tossed at our scientist friend making her scream and throw a fit just before the croc shears off the head of a deputy in a splash of water, still unseen. Now, obviously this is impossible, seeing as a crocodile has gripping teeth as opposed to shearing teeth, and even if it were to rip off someone's head (highly unlikely) it would take quite a lot of effort. And why could I see trees through the splash of water, but no crocodile?

Eventually, on land, a human toe is found, and the head of the deputy who was decapitated earlier rolls over toward our heroine so that she can scream about everyone tossing severed heads at her. But, to save your sanity, she is interrupted so that everyone can spy on Betty White as she feeds a cow to the crocodile (a bear is eaten later in the film, too). The four go over to talk to her, and she explains that she and her husband (accidentally eaten) had been feeding this creature, since no one ever was by the lake.

Well, to make a long story short, there are a few more encounters with the croc, which eventually lead to (like *Anaconda*) sort of a let-down climax. (Once again, tranquilizer is used on a reptile, a big no-no.)

As for the CGI*, this film blows *Anaconda* out of the water, but that's not saying all that much is it? This contains passable CGI in some parts, and in others, it is even a bit better than this. One of the problems, though, is the croc moves too fast on land.

Think about this for a minute. This is a big lake, in Maine, so the water would most likely be cold. That would mean that the crocodile realistically should be moving at the speed of a snail on a powerful depressant. But, the story wants us to believe that this is some kind of super croc. While no explanation is given for how this 30-foot reptile managed to get from Asia to Maine, they do present the theory that it somehow made its way across the Pacific, and then, somehow all the way around North or South America and ended up in Maine. Even the characters themselves comment on the implausibility of this theory.

But the story's biggest downfall, I think, is in the characters. While on the outside they may appear to be real people, on closer inspection they are not all that real at all. They seemingly have no hopes, fears, dreams and aspirations other than absolutely necessary to the plot. While there is some memorable dialogue, the characters never seem fully developed, and I think that making them more three-dimensional would not only add to the quality of the movie (as well as the number of stars in its rating) but to the scant hour-and-twenty-two-minute running time.

I went into this movie with what I hoped was an open mind, though it might have been tilted slightly in favor of the movie by positive remarks from others, and I still enjoyed the thing, despite all of the implausibilities. It's fast and there's witty dialogue, and the scenery and camerawork are absolutely spectacular. (It's too bad I didn't wait a day and see it in a better theater.) My hat goes off to Director Steve Miner, for this camerawork. His previous cinematic outings have included *Friday the 13th*'s and *Halloween:H20*. While none of these were great, his style has improved over the years. The screenwriter has also done a good job (aside from the charac-

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* Computer Generated Images

ters) by writing a fast, action-filled story, and coming up with delightfully witty dialogue that made the movie for me.

I must comment on Roger Ebert. He gave *Lake Placid* one star! While it's no *Casablanca*, it is certainly better than *Anaconda*, to which he gave ***½. *Anaconda* pales in comparison to this! Sad.

Well, it seems as though herps are making a huge comeback (from nothing) in Hollywood, seeing as *Lake Placid* managed to come in fourth for the highest amount grossed for the week of July 16–July 22. See it—you might find it to be a guilty little pleasure. Sort of.

20th Century Fox, 1999, 82 min.

MPAA rating: R for: strong graphic violence, and pervasive strong language

Coming Soon

August 10—	*King Cobra* [King Cobra] (direct-to-video)
October 22—	*The Wisdom of Crocodiles* [Crocodiles]
Undated 1999—	*Komodo* [Komodo dragons]
Undated—	*Krocodylus* [Crocodile]; *Crocodile* [Crocodile]; *Godzilla 2000* [Godzilla (obviously)]; *Gamera 3* [Giant super-turtle (in the vein of Godzilla)]; *Python* [Python(s)]

Bull. Chicago Herp. Soc. 34(8):195-197, 1999

HerPET-POURRI

by Ellin Beltz

Greetings from lizard land

As I write this, Chicago swelters under tropical heat and humidity and Dave Chiszar presented last night down in the air conditioned Field Museum. I'll leave it to Gary to tell you about meetings (hint and thanks for the photos!) and get right down to all the cool clippings I've received this month.

Borrow a child and go

Dinosaur Expedition is open for the rest of the summer at the Chicago Children's Museum at Navy Pier, 700 East Grand Avenue, Chicago. The exhibit recreates conditions on an actual dinosaur expedition to the nation of Niger just like the one on which CHS members Paul Sereno and Gabe Lyon discovered the crocodile mimic dinosaur, *Suchomimus*. You enter through a tent into the field camp in the Sahara Desert. A tent, a truck and the dig await you. You'll sift through up to 10 inches of "clean clay," a toy material which does not stick to clothes (unlike real Sahara dust!) to excavate cast dinosaur bones. A few things you will miss however, include 5000 lbs of garlic powder and a few thousand gallons of truck fuel. The site is also air conditioned and it only costs about $7.00 (you save plane fare to Tunisia and you can go home the same day, too). Call the museum at (312) 527-1000 for more information. [*The Times*, June 20, 1999, from Jack Schoenfelder]

Two frog mysteries solved?

• Researchers in Australia noted frog die-offs in pristine, unpolluted areas. They studied UV light and found that it is not on the rise in Oz as it is here. But the frogs kept dying. What they found in the dead frogs' skin was a fungus called chytrid. They suspect the foreign chytrid landed near the port of Brisbane—perhaps on an exotic frog shipped in the 1970s. It traveled about 100 kilometers (66 miles) a year; striking in urban areas first. By last year, it had jumped the continent, perhaps in a frog stowaway in a fruit box or other suitable but unintended shipping container. Meanwhile in Central America, researchers were noting the same, puzzling patterns of decline. When they checked for the chytrid, they found it on 10 different frog species from western Panama. Others have confirmed its link to other die-offs in Costa Rica. Experiments in the lab confirmed that the chytrid organism causes the disease. One researcher had proposed in 1993 the name "post metamorphic death syndrome" because he had noted that newly transforming tadpoles died almost instantly. Chytrid lives in tadpoles' mouths, and spreads through frogs' skin after transformation—killing the froglets. The chytrid prefers cold water, so it may be implicated in amphibian winter kill. But it is still being questioned if *all* amphibian die-offs could be linked to the one organism. One researcher pointed out that there is no pathogen which kills all mammals, so why would we expect one pathogen to wipe out all frogs? [*Science*, April 30, 1999, from Eloise Beltz-Decker]

• On the next page is a news article suggesting that some deformed amphibians may be suffering from trematode infections. All the deformed amphibians in certain Palo Alto, California, ponds studied were analyzed, and trematode cysts were found around their deformed limbs. Infecting frogs with the trematode at certain development points results in these particular deformities. Retinoids have been studied and it was found that caused only some mirror image duplications and deformities from elbows—not from shoulders. (Please be reassured by this last point.) So far, no one has found the trematode, *Ribeiroia*, in Midwestern U.S. ponds. Read all about it: April 30 *Science*, from Eloise Beltz-Decker; *Arkansas Democrat-Gazette*, from Bill Burnett; *Chicago Tribune* from Claus Sutor; May 1 Tempe, Arizona *Tribune*, from Tom Taylor; *Science News*, Volume 155, from Mark Witwer.

Why did the snake cross the road?
"*National Wildlife* magazine reports that every time a snake or turtle crosses the road, there's one chance in 12 that it won't make it. . . . [The researcher] found that 87 percent of the motorists observed went out of their way to avoid [the rubber snake] . . . and that twice as many drivers made a special effort to hit a [rubber] snake than to strike a [rubber] turtle." [*The Outdoor Times*, May 28, 1999, no name on the clipping]

To get caught on the bridge
"Morning rush hour traffic slowed to a crawl . . . on the Pensacola Bay Bridge as motorists gawked at a 6-foot-long boa constrictor lying on a side wall near the middle of the three-mile span. . . . One driver alerted police. . . . Within minutes [the officer] confirmed the motorist was not nuts . . . [and called the] reptile removal service. `He picked it up like it was his wallet, put [it] into the back seat of his station wagon and then drove away,' the officer said." [Leesburg, Florida *Daily Commercial*, April 13, 1999, from Bill Burnett]

Why did the gator cross the road?
Because he's in love. Or at least that's what Arkansas Game and Fish Commission District officers in Hope are telling people. Several vehicles including a logging truck have become entangled or run over alligators, some up to 11 feet long. Officers say that there's no more movement than usual. [*Arkansas Democrat-Gazette*, June 5, 1999, from Bill Burnett] I'd point out that not too long ago there weren't enough alligators to actually see one—let alone call them "usual." Humans pushed them to the edge, but on returning they took every pond all the way up to the Mississippi Embayment fall line. Were they in all those ponds before? If not, I wonder what kept them down in the past: climate, diet, pests, hunting, etc. Or is this just another version of the story of people moving into places that young alligators are also using. Will it all quiet down eventually when these teens reach maturity—or is this just the tip of the iceberg of "Gator ate me" stories yet to come? Stay tuned.

To close the loop
So far, only one chicken farmer in Arkansas has been brave enough to seek a license to use farm alligators to eat waste bits from chicken production houses. There is a lot of interest, but until hides, meat, heads or whatever is more in demand than it is now, other farmers are not going to invest. While farmed hides are cleaner than wild caught, demand from the fashion industry is stagnant and we all know wild alligators are increasing. [Little Rock, Arkansas *Democrat-Gazette*, May 11, 1999, from Bill Burnett]

Headlines and tombstoning
Anyone who ever set type recalls "headlines," those cute little phrases to catch the eye. And I've often been accused of "tombstoning," running headlines which read oddly together. More curiously, one outraged reader was upset at the way they were arranged by my editor and published which seems rather out of my control. True tombstoning is actually when the writer or the editor *doesn't* get it. For example, from the *Albuquerque Journal*, "S.C. Man Mauled by Alligator," then "Computers May Contain Clue." [June 7, 1999, thanks to J. N. Stuart] The best headline in this month's clippings read "Life was bad enough, then some giant lizards show up. The ugly, fierce-looking creatures have wandered into yards in DeLand, Florida, and frightened residents haven't hesitated to call the police. . . . A 5-foot Malaysian monitor was shot dead last week by . . . police, [one of whom said,] `This is kind of like a crocodile on crack cocaine. They're skinnier and faster and pretty aggressive. . . . It may look cute when it's young, but they get big and nasty.'" [Orlando, Florida *Sentinel*, from Bill Burnett's mom and Bill, too, of course]

Ozzie conference approaches
Folks wanting last minute directions to the Conference (to Mark the 50th Anniversary of the Australian Herpetological Society) on Captive Husbandry and Conservation of Reptiles and Amphibians can contact Daniel Holloway (02) 9544-6492 or <rego@ozherps.zipworld.com.au> or snail P.O. Box 1099, Sutherland, NSW 1499, Australia. [Stuffed in *Herpetofauna*, Volume 28, Number 2, from the New Zealand Herpetological Society]

Speaking of anniversaries
This month I wrote my 50th column for *Vivarium* (10.6), have been married for 10 years to fellow herpetologist Ken Mierzwa and celebrate three years of teaching at colleges and Northeastern Illinois University where I will be in the Earth Science Department as Visiting Lecturer for at least the next year. Wow. Time flies. Can I eat them?

Psychic toads
Contestants for the annual Conway, Arkansas, Toad Suck Daze were harder than ever to find this year. One toad hunter said, "It's almost like they know when the season begins." One runner who uses a trail regularly said that there were "millions" of toads along the trail in recent weeks; when the season opened, there were none. [*Arkansas Democrat-Gazette*, April 30, 1999, from Bill Burnett] One hopes they all hop back out the day after the party's over.

Snake charming in the '90s
A Phoenix, Arizona, dog trainer uses "defanged rattlesnakes and a shock dog collar, which administers an electrical jolt. As soon as a curious dog moves to investigate the rattler, the pooch gets zapped." She says that they "want to instill fear in these dogs." Another trainer said, "Shock collars are severe, but look, the alternative in this situation is a dead dog." [*Chicago Tribune*, April 25, 1999, from Ray Boldt]

Right where this belongs
News of the Weird reports that a judge ordered a Fishkill, New York, business owner to remove a four-foot-high fence he had erected on his property to protect his workers from the horrible rattlesnakes who lived in the rocks nearby. [*The Reader*, June 25, 1999, from Ray Boldt]

One wave of immigrants rejected by the golden lamp
Iguanas, dingoes, pythons, snapping turtles, prairie dogs, ferrets, wombats, vultures and dozens of other species have

been outlawed as pets in New York City because they are "wild, ferocious, fierce, dangerous or naturally inclined to do harm." The Board of Health actually included a list of 150 species by name so pet owners could no longer claim their animals were not wild, ferocious, fierce, dangerous or naturally inclined to do harm. [*New York Times*, June 30, 1999, from Karen Furnweger, who adds "who wants to live in NYC anyway."] I want to see N.Y. outlaw some exotic muggers, loose footpads, all cutthroats and fiends, ruby-nosed perverts, common gangbangers and other few other subspecies next—and make it stick.

Deal with it

The U.S. Supreme Court will not hear Volusia County's sea turtle lawsuit, but refers it back to the federal district court in Orlando, where a hearing is scheduled for next February. By not hearing the case, the court left in place an appellate court decision that makes Volusia responsible for artificial lighting along beaches, which harms sea turtles. [Orlando, Florida *Sentinel*, April 20, 1999, from Bill Burnett] What's the problem with this county? It seems like I have been reporting this story for years. Local turtle people have pointed out the baby turtles are disoriented by the lights and die. Every year they die. Every year some developer gets more lights for another shopping center or home site. Surely someone can get creative and keep the lights low—or even have light levels change to darker at times when the turtles are hatching. Pretend they're WW II submarines and douse the lights. It might even be "romance weekend" on the beach. C'mon folks, you make all your income from tourism—and an increasing amount from ecotourism to see these same turtles—can't you get with the program and just fix the lights?

Chicago's urban jungle

From Laurie Goering in Rio de Janeiro, some lovely writing about our hometown. "Chicago, I'll admit, has no shortage of wildlife. Raccoons rattle the garbage cans in back alleys. Beady-eyed opossums take up furtive residence in garages. Occasionally the odd coyote makes a wrong turn off the banks of the Chicago River and ends up skulking through Lincoln Park. Nowhere, however, does the urban wildlife match that in Brazil, and if you think living in the country with the world's greatest biodiversity is a treat, wait until it all sneaks into the living room with you." Read the rest at <www.chicagotribune.com> dated June 24, 1999, originally published in Section 1, page 14 of the *Chicago Tribune* [sent by Ray Boldt]

Don't call; ribbet and write

The Declining Amphibian Task Force is now active in countries from Argentina to Venezuela, Madagascar, Sri Lanka, Uganda, Switzerland, England and others too numerous to list. Contact John Wilkinson, Department of Biological Sciences, The Open University, Walton Hall, Milton Keynes MK7 6AA UK or E-mail <DAPTF@open.ac.uk> [their brochure in *Froglog*, Number 32]. Also in this issue is a study by Jennifer C. Daltry and Gerard Gray on the effects of the Montserrat Caribbean volcanic eruptions on the endangered mountain chicken frog (*Leptodactylus fallax*). Tim Halliday requests information from "anyone who has data on changes in amphibian breeding dates in relation to climate." E-mail <t.r.halliday@open.ac.uk>. And Tony Gent weighs in with an interesting article on "The UK Pool Frog Species Action Plan." At first *Rana lessonae* were thought to have been an 18th century introduction, but some seem different from their Belgic and French relatives and records of the species go back further than the supposed introduction date. So now England faces the possibility that this possible native anuran has been ignored in conservation—having had the status of "illegal alien" for so long. Finally, he notes "unfortunately, just as we started to look at this issue, the one surviving native population had dwindled to very low numbers and is now possibly extinct. . . . Gross habitat change does not appear to have happened at the remaining site . . . but we need to address the cause of the decline before [anything else can be done]." E-mail <lowlands@english-nature.org.uk>.

Here they go again

As many as 30 pet turtles were taken from the backyard of a Northeast Heights, New Mexico (near Albuquerque), resident. They had been living in "a turtle Eden—a walled garden filled with a diet of fruits and vegetables tailored to their nutritional needs," according to the *Albuquerque Journal*. [June 8, 1999, from J. N. Stuart]

Websites

- Center for Marine Conservation <www.cmc-ocean.org>
- Virtual swampland adventure with Nile crocodiles <www.pbs.org/wgbh/nova/crocs/>
- International Iguana Society <www.members.home.net/iis/IISHomePage.html>
- By the way, if you have trouble with typing in the long and exacting web names, try this trick. Call up <www.snap.com> or <www.yahoo.com> and type in the "key words" of the page you would like to see. The key words can be the name of the group or a specific phrase. The search engine will bring up sites that match the words you used. Try putting in your own name and see what you get. Also look up City of Chicago for answers to every question you ever had about water/air quality, links to transit and the CTA as well as all city services. Quite amazing; the web is like an electronic encyclopedia. Have fun.

Thanks to this month's contributors and to Bill Burnett, Tom Taylor, Suzette Sosa, E. A. Zorn, Karen Furnweger, Mark Witwer, J. N. Stuart, Rob Lovich, Chicago correspondents Claus Sutor and Ray Boldt, Jack Conrad, Gabe Sereno and her Junior Paleontologists for a super field trip, Jon Myers, my students at NEIU and NEIU/El Centro and everybody who is going to send in a clipping for next month's column. Send whole pages of newspapers and magazines (they're light—it's still cheap to mail) with the date/publication slug firmly attached and your name on each page to: Ellin Beltz, 1647 N. Clybourn Avenue, Chicago, IL 60614-5507. Letters only to my ancient E-mail system <ebeltz@ripco.com>.

Bull. Chicago Herp. Soc. 34(8):198-201, 1999

Herpetology 1999

In this column the editorial staff presents short abstracts of herpetological articles we have found of interest. This is not an attempt to summarize all of the research papers being published; it is an attempt to increase the reader's awareness of what herpetologists have been doing and publishing. The editor assumes full responsibility for any errors or misleading statements.

RELEASE OF CAPTIVE-RAISED PLOUGHSHARE TORTOISES

M. Pedrono and A. Sarovy [1998, Dodo, J. Wildl. Preserv. Trusts 34:173-174] report on a trial release of five captive-bred juvenile ploughshare tortoises, *Geochelone yniphora*. The animals released were among the first to be born in captivity, between 8 and 9 years old, and weighed nearly 2 kg. They were released in an area of natural habitat to the west of Baly Bay, in Beaboaly, from which the tortoise had apparently disappeared some 20 years previously. The area was sufficiently large to study individual dispersal, but was without habitat connections to wild tortoise populations. All of the released individuals were fitted with radio transmitters. All five tortoises survived the first year in the wild. No homing phenomenon, as has been reported in adults kept as pets, was observed. The greatest dispersal was of 800 m and the tortoises established clear home ranges after three months. The authors believe that this trial established that captive-bred ploughshare tortoises of ~2 kg can survive in their natural habitat. Thus reintroduction can be considered a viable strategy for this endangered chelonian.

HAWKSBILL MOVEMENTS AND BEHAVIOR

C. H. Starbird et al. [1999, Chelonian Cons. and Biol. 3(2): 237-243] used radiotelemetry to monitor internesting movements of 7 female hawksbill turtles, *Eretmochelys imbricata*, near Buck Island Reef National Monument, St. Croix, U.S. Virgin Islands. Three turtles returned to short (0.06 km) sections of nesting beach on which they had previously nested. Offshore movements were confined to approximately 1.5 km^2, and indicated some level of residency. The resident areas were within 3 km of Buck Island and water depth ranged form 9 to 20 m. Four hawksbills left the region immediately following their last seasonal nesting event, indicating that hawksbills may undergo reproductive migrations. Dive behavior and movement patterns were analyzed for days 2–12 of the internesting periods. Mean duration of dive was 56.2 min and mean surface time was 1.6 min. Mean dive duration was 33.8 to 63.5 min during the day and 41.7 to 73.5 min at night.

BARBOUR'S SHORT-HEADED VIPER

J. B. Rasmussen and K. M. Howell [1998, African J. Herpetology 47(2):69-75] report that the recent collection of 13 specimens of the Tanzanian endemic *Adenorhinos barbouri* more than doubles the number of known specimens of this rare viper. The authors examined internal and external characters in the older and the more recently collected specimens and summarized character variation. Based on limited information from collectors' notes and dissection of the alimentary canal, *A. barbouri* appears to be a species of the forest floor; both juveniles and adults prey on earthworms and adults may also feed on anurans.

HISTORICAL HAWKSBILL HARVEST IN CUBA

E. Carillo et al. [1999, Chelonian Cons. and Biol. 3(2): 264-280] report that since the 1500s hawksbill turtles (*Eretmochelys imbricata*) have been harvested for food and tortoiseshell trade in Cuban waters. Between 1935 and 1994 an estimated 168,781 animals (8600 metric tons live body weight) were harvested. Starting in 1968 the harvest was managed as a commercial fishery in four fishing Zones (A–D) with the goal of sustaining an annual harvest indefinitely, rather than maximizing the catch in any one year. Catch effort was controlled and reasonably constant. The boundaries of the populations harvested were imprecisely known and probably varied between Zones. Between 1968 and 1990 an average of at least 4744 animals were harvested annually. Starting in 1990, as part of a fisheries rationalization program, the historical turtle fishery was phased down to the current (1995–98) traditional harvest of <500 hawksbills per year from two harvest sites (one each in Zones B and D). Mean weight of hawksbills harvested decreased significantly from 51.1 kg in 1983–86 to 43.6 kg in 1987–95, although capture biases may be involved. Mean size varied at different times of year in Zone-specific ways. In Zone D, the mean size at all times of year appeared stable through the 1980s and 1990s. In other Zones, the mean size of turtles caught in some months was stable over the 1980s and 1990s and declined in other months. Sex ratios of animals caught were heavily female biased ($>80\%$) in all Zones, even those without significant nesting, and showed no significant change over time. The percentage of adults in the harvest continued to decline in Zone A but stabilized in Zone D. DNA analyses to date indicate that 67% and 64% of *E. imbricata* currently caught in Cuban waters (Zones B and D, respectively) could originate from nests in one part of Cuba (Zone A), regardless of whether intermediate growth stages were completed elsewhere. Others appear to originate from a variety of nesting and foraging areas within and outside of Cuban waters. The impacts and degree of sustainability achieved by Cuba's historical harvest of *E. imbricata* are largely unknown. The wild population was probably significantly reduced prior to the fishery being reorganized in 1968, but from the 1980s onward, when more extensive records were kept, the reduced wild populations continued to support a significant annual harvest without any further dramatic decline in abundance or change in sex ratio. A suite of more subtle and gradual declines were occurring, perhaps very significant to assessments of potential sustainability. Impacts of the Cuban harvest on regional Caribbean populations in the 1980s and 1990s are unclear, but the extent of nesting on various beaches monitored in the wider Caribbean suggest that although numbers of nesting females were probably reduced relative to past levels, sometimes greatly, regional trends were stable and possibly increasing rather than decreasing during the 1980s and 1990s.

PLATEAU LIZARD SPACING PATTERNS

A. J. Abell [1999, Amphibia–Reptilia 20(2):185-194] studied the spatial distribution of *Sceloporus virgatus* in the Chiricahua Mountains of Arizona during the breeding season. Male home ranges were, on average, more than four times larger than those of females. Home range overlap of both sexes was extensive, with most individuals overlapping multiple males and multiple females. Home range overlap of males with females was significantly correlated with an independently calculated estimate of male mating success. For most females (71%), one of the males overlapped a substantially larger portion of her home range than any other male. Similarly, for most females (76%) a single one of the overlapping males courted the female more often or was sighted, at closer distances to the female. The remaining females did not associate primarily with a single male.

FRILLNECK LIZARD SEX DETERMINATION

P. S. Harlow and R. Shine [1999, Herpetologica 55(2): 205-212] incubated 56 eggs from six clutches of the frillneck lizard, *Chlamydosaurus kingii*, at four thermal regimes in the laboratory: constant temperatures of 26, 29 and 32°C, and a diurnally cycling regime (33 $\pm$ 5°C) designed to mimic extreme natural nest temperatures. Incubation temperatures determined hatchling sex; all hatchlings from the hottest and coldest thermal regimes were female, with males produced only at intermediate temperatures. Thermal regimes also determined incubation periods and significantly affected hatchling sizes. The sexes differed in size (mass, snout–vent length, tail length) at hatching, but the influence of incubation temperature on hatchling morphology was similar in the two sexes. Several attributes of *C. kingii* suggest that it offers an ideal opportunity to investigate the adaptive significance of temperature-dependent sex determination in reptiles.

GARTER SNAKE RESISTANCE TO TETRODOTOXIN

B. J. Ridenhour et al. [1999, Copeia (2):531-535] note that the garter snake *Thamnophis sirtalis* is a known predator of the toxic newt *Taricha granulosa*. Resistance to the primary toxin of the newt, tetrodotoxin (TTX), varies among individuals and has a genetic basis. The authors investigated the consequences of long-term exposure to this toxin in an experiment designed to determine (1) whether increased tolerance to tetrodotoxin occurs following repeated injections of tetrodotoxin in *T. sirtalis* and (2) whether repeated exposure to tetrodotoxin has an effect on the growth of juvenile snakes. They measured resistance to tetrodotoxin for each individual based on reduction in crawl speed. Pairs of neonatal snakes were chosen based on similar resistance and size and randomly split into two groups, control and experimental. Each group received intraperitoneal injections every two weeks of either saline (control) or tetrodotoxin (experimental) for six months. Mass data were collected five times during the year. Length data were collected twice during the year. After one year, resistance was again measured and compared with neonate resistance. Analyses showed that repeated injections of tetrodotoxin had no effect on resistance or growth.

TAILED FROG DISTRIBUTION AND HABITAT

L. V. Diller and R. L. Wallace [1999, J. Herpetology 33(1): 71-79] studied the distribution and habitat of larval *Ascaphus truei* in first and second order streams of managed forests in north coastal California from 1993 through 1996. Of 72 streams randomly selected to relate landscape variables to the presence of *A. truei*, 54 (75%) contained larvae. Geologic formation was the only landscape variable that predicted the presence of *A. truei* in a stepwise logistic regression (SLR) model. A second survey was conducted to determine which habitat variables of stream reaches were related to the presence of *A. truei*. Larvae were found in 18 (37%) of 49 stream reaches with flows >1500 cm^3/sec, and percent fines (negative association with frog presence), stream gradient (positive association), and water temperature (negative association) were the only habitat variables of 21 measured that entered a SLR model to predict the presence of *A. truei*. Only stream gradient differed significantly between reaches with and without tailed frogs; canopy cover, temperature, and forest age were not significantly different. A final survey to further define the microhabitat used by larval *A. truei* showed that larvae were found more often than expected in high gradient riffles and less often than expected in pools and runs. Occurrence of larvae was positively associated with cobble, boulder, and gravel substrates with lower embeddedness, and negatively associated with fine substrates. The authors discuss the comparative habitat requirements and sensitivities to land management activities of the two amphibian headwater stream inhabitants, *A. truei* and *Rhyacotriton variegatus*, in the study area.

ECOLOGY OF TWO COMMERCIALLY HARVESTED PYTHON SPECIES

R. Shine et al. [1999, J. Herpetology 33(2):249-257] examined specimens collected for the international leather trade to gather data on two species of large, heavy-bodied snakes: blood pythons (*Python brongersmai*) from northeastern Sumatra and short-tailed pythons (*P. curtus*) from northwestern Sumatra. Measurement and dissection of 2063 *P. brongersmai* and 181 *P. curtus* revealed broad interspecific similarities in morphology (size, shape, sexual dimorphism), food habits (feeding frequencies, dietary composition) and reproductive output (reproductive frequencies, egg sizes, and clutch sizes). Females of both species attain larger sizes than males, mature at larger sizes, and contain larger abdominal fatbodies. *Python curtus* is heavier-bodied and longer-tailed than *P. brongersmai*, and more heavily infested with gut parasites. Both species feed almost exclusively on commensal rodents. Feeding rates increase with body size, and vary seasonally. Reproduction is highly seasonal. Adult females reproduce biennially, producing an average clutch of 12 to 16 large (mean = 83 to 90 g) eggs. The data also permit comment on the sustainability of the existing commercial trade, which is based mainly on adult males, and adult plus juvenile females. Anthropogenic habitat modification (especially, the establishment of oil-palm plantations) has increased the abundance of these taxa. Although neither species is likely to be extirpated by current levels of offtake, additional information is needed to evaluate long-term sustainability of the commercial industry based on these snakes.

BROWN TREE SNAKE MOVEMENTS ON GUAM

M. E. Tobin et al. [1999, J. Herpetology 33(2):281-291] note that brown tree snakes (*Boiga irregularis*) inadvertently introduced to the island of Guam shortly after World War II, have had catastrophic effects on the native fauna of this U.S. territory. These authors used radiotelemetry to monitor daytime refugia and nightly movements of 60 brown tree snakes (30 during each of two seasonal periods) to determine the extent of nightly, weekly and monthly movements. Eighty-three percent of subadult daytime sightings were in trees, compared to only 49% of adult daytime sightings. Most measures of movement did not vary with seasonal period, sex, or age class. The snakes moved an average of 64 m (Range: 9–259 m) between successive daily refugia. Mean total cumulative distance traveled between successive locations from one afternoon to the next was 238 m during January–March and 182 m during May–July. However, over the course of each seasonal period (60–70 d), most snakes concentrated their activity within core areas. During each of the two seasonal periods, snakes were located a mean distance of only 78 m and 93 m, respectively, from their original release points 30–50 d after release. Sixty to 70 d after release, snakes were a mean distance of 92 m and 68 m, respectively, from their original release points. Snakes frequently crossed dirt roads that separated forested areas at the study site. They also utilized grassy and brushy clearings, but less than would be predicted by the occurrence of such clearings in the study area. These results suggest that under the conditions of this study, brown tree snakes would be slow to reinvade areas where snakes have been removed by trapping or other means.

EFFECTS OF MARINE TOAD TOXINS ON OTHER TADPOLES

M. R. Crossland and C. Azevedo-Ramos [1999, Herpetologica 55(2):192-199] note that eggs, hatchlings and tadpoles of bufonids are unpalatable or toxic to some aquatic predators but are readily consumed by other species without ill effect. They investigated the effects of toxic *Bufo marinus* on potential predators (tadpoles) that are phylogenetically related but which differ in their history of evolutionary exposure to *B. marinus*. The aim was to learn whether the behavioral and/or physiological responses of tadpoles to toxic *B. marinus* varied depending on their history of evolutionary exposure to these toxins. Dead tadpoles of *B. marinus* and other species were offered as food to anuran larvae in controlled laboratory experiments in native (Brazil) and exotic (Australia) habitats of *B. marinus*. Tadpoles in Brazil consumed dead tadpoles of *B. marinus* without any apparent ill effect but avoided them when alternate food was available. In contrast, the majority of Australian tadpoles died after consuming dead tadpoles of *B. marinus*. The tendency of Australian tadpoles to avoid consuming larval *B. marinus* when alternate food was available varied widely. Some species largely avoided larval *B. marinus* and experienced high survival rates. Other species, however, did not avoid consuming tadpoles of *B. marinus* and experienced low survival rates. Differences in the responses of tadpoles in Brazil and Australia to toxic *B. marinus* may result from differences in their evolutionary histories of exposure to these toxins.

EFFECTS ON DESERT TORTOISES OF POST-HATCHING MAINTENANCE TEMPERATURE

C. L. Reiber et al. [1999, J. Herpetology 33(2):234-240] studied the effects of post-hatching maintenance temperature on growth, morphology, and behavioral thermoregulation in the desert tortoise (*Gopherus agassizii*). Tortoises were held at one of three temperatures (19, 28, 37°C) during the four months following hatching, then placed into a control temperature of 28°C. Body mass, maximum plastron width, height, and length ratios were determined monthly for the following year. Nine months post-hatching, cloacal and shell temperatures were determined while animals were allowed to behaviorally regulate their temperature in a thermal gradient ranging from 23 to 45°C. Animals held at 37°C had a greater surface area-to-volume ratio (flat morphology) than animals maintained at 19 or 28°C (round morphology). These morphological changes were correlated with thermoregulatory behavior. Animals with a greater surface area-to-volume ratio (37°C) had a lower cycle frequency (movement between min and max temperatures) and higher mean core temperature than 19 and 28°C animals. These experiments indicate the existence of a window during juvenile development in which temperature will influence morphological and behavioral characteristics.

REVISION OF BOLIVIAN *APOSTOLEPIS*

M. B. Harvey [1999, Copeia (2):388-409] reports that six species of the colubrid snake genus *Apostolepis* are known to inhabit Bolivia. The holotypes of *A. dorbignyi* and *A. nigroterminata* are redescribed. Variation in these species and *A. tenuis* and *A. vittata* is documented. Two new species are described: *A. multicincta*, from 1290 m in the Bolivian Andes, is the first species of the genus ever found above 500 m; *A. phillipsi* is a new species from northeastern Santa Cruz department. A key is provided to the Bolivian species and six species from adjacent countries.

SKINK ECOLOGY IN SOUTHEASTERN BRAZIL

D. Vrcibradic and C. F. D. Rocha [1998, J. Herpetology 32(2):229-237] report that *Mabuya frenata* is a relatively common skink in the region of Valinhos, São Paulo State, Southeastern Brazil, an area with a highly seasonal climate. They studied the activity, thermal ecology, habitat use, and diet of this species in the vicinity of Valinhos. Lizards were active throughout daylight periods, but the activity pattern differed between seasons, being more uniform in the rainy season than in the dry season. The mean body temperature of active *M. frenata* was 31.6 $\pm$ 3.2°C and was correlated with air and substrate temperatures, although direct insolation may also be an important heat source for this lizard. Unlike environmental temperatures, the mean activity temperature of *M. frenata* did not differ between seasons, which, combined with field observations, suggests that this lizard thermoregulates. The microhabitat preferred for *M. frenata* was granitic boulders. The diet included a great variety of arthropods, although termites were the dominant items. The diet of *M. frenata* did not differ between sexes or between seasons and was related to prey availability in the environment.

ECOSYSTEM ENGINEERING BY TADPOLES

A. S. Flecker et al. [1999, Copeia (2):495-500] note that tadpoles of the web-footed frog, *Rana palmipes*, are epibenthic consumers that are widely distributed in the Neotropics. *Rana* tadpoles feed on algae and sediments and potentially act as ecosystem engineers by modifying habitat structure via their foraging activities. The authors conducted two experiments in the Andean piedmont of Venezuela to examine the following questions: (1) Can *Rana* tadpoles influence benthic sediment distributions? (2) Are growth rates of sediment-feeding tadpoles density dependent? and (3) Are sediments viable nutritional sources for tadpoles? A field enclosure experiment was conducted in which sediment accrual and daily growth rates were compared among four tadpole density treatments ranging from 1 to 10 individuals per m^2. Tadpoles had highly significant effects on stream sediment accrual that were inversely related to tadpole density; thus, benthic sediments rapidly accumulated when tadpole density was low (one tadpole per m^2), whereas substrata were thoroughly cleared of sediments when tadpole densities were high (10 tadpoles per m^2). Furthermore, over the course of the experiment, daily growth rates of tadpoles were strongly affected by tadpole density, and individuals from low-density treatments displayed greater than five times the daily growth of tadpoles from high-density treatments. A second experiment was conducted in wading pools to assess the importance of benthic stream sediments as a nutritional source for tadpoles. Tadpole daily growth and development were measured in pools in which diets were supplemented with stream sediments and compared to tadpoles from pools with no sediment addition. Tadpoles displayed net positive growth and significantly higher development rates when stream sediments were added to wading pools. In contrast, tadpoles lost weight in the absence of sediment supplements. Results suggest that tadpoles can act as ecosystem engineers by reducing sediment accrual rates; however, low availability of sediments can negatively feed back on tadpoles by reducing their daily growth rates.

TECHNIQUES FOR SAMPLING AMPHIBIANS

K. M. Parris et al. [Herpetologica 55(2):271-283] employed three techniques for sampling amphibians (nocturnal stream searching, pitfall traps with drift fences, and automatic tape recording of anuran calls) concurrently for six nights at 20 forest sites in southeast Queensland, Australia, to compare their performance. Nocturnal stream searching was the most sensitive sampling technique, detecting the most species with the fewest nights of survey. Pitfall trapping was the least sensitive sampling technique. On average, a minimum of four nights of survey was required to detect the range of amphibian species present at a site. Nocturnal stream searches and automatic tape recorders were robust in the range of conditions encountered during the survey, with no significant relationships found between temporal or spatial variation in their performance and weather or site conditions. This systematic study represents one of few to compare different techniques for sampling amphibians in a given region, and the first such study to compare automatic tape recording of anuran calls with other, more traditional sampling techniques.

VENOM AND DIET IN TWO *BOTHROPS* SPECIES

D. V. Andrade and A. S. Abe [1999, Herpetologica 55(2): 200-204] studied ontogenetic changes in venom toxicity of the pitvipers *Bothrops jararaca* and *B. alternatus* in order to evaluate the relationship between venom action and diet. Toxicity tests (LD_{50}) were performed for the venoms of adult and juvenile snakes on mice and bullfrog froglets, which represented endothermic and ectothermic prey respectively. The venom of juveniles of *B. jararaca*, but not of *B. alternatus*, had a higher toxicity on anurans than that of adults. This finding is consistent with the feeding habits of these two species, because juveniles of *B. jararaca* feed mainly on small anurans and lizards, shifting to endothermic prey at maturity, whereas *B. alternatus* preys mainly on endotherms throughout its life,. Venom toxicity in endotherms was higher for adults of *B. jararaca*, compared to juveniles, a feature not observed for *B. alternatus*. It is proposed that prey death/immobilization is the main function of the venom of juvenile snakes. As the snake grows, the digestive role of venom may become increasingly important, because adults prey upon large and balky prey. The importance of adult venoms in prey digestion is reflected in their higher proteolytic activity.

TAG RETENTION IN CARIBBEAN HAWKSBILLS

R. P. van Dam and C. E. Diez [1999, Chelonian Cons. and Biol. 3(2):225-229] used four types of individually coded tags (monel and inconel metal alloy, plastic, and passive integrated transponder [PIT]) to identify individual hawksbill turtles (*Eretmochelys imbricata*) in the near-shore waters of Mona and Monito Islands, Puerto Rico. A multiple tag application protocol was followed for most turtles. The recapture and examination of 121 turtles up to 5 years after tag application allowed the authors to evaluate differential tag retention rates. Plastic tags outperformed all other examined tag types, with 100% retention recorded for 42 tags applied to 42 turtles. Retention rates for the other tag types generally declined with time. Listed in order of decreasing retention rates they were: plastic, PIT, inconel alloy, and monel alloy tag types. The attachment of multiple tags per turtle together with regular replacement of lost tags promises to be effective for the long-term identification of most hawksbill turtles in the study area.

Unofficial Minutes of the CHS Board Meeting, July 16, 1999

The meeting was called to order at 7:45 P.M. Board members Karen Bielski, Audrey Vanderlinden and Don Wheeler were absent.

Officers' and Committee Reports

The minutes of the June Board of Directors meeting were read and accepted.

The Treasurer's report, including a finalized ReptileFest financial report, was accepted.

Membership: Current membership is 888.

Monthly programs: Mike Dloogatch reported that there are no definite speakers lined up after the July general meeting but that he has two commitments from interested speakers for the latter half of the year. Jennie Picciola also mentioned that Chuck Knapp, 1998 CHS grant recipient, would like to fulfill his commitment to present his research at a general meeting towards the end of this year.

Shows: Recently, the CHS was represented at the Great Lakes Reptile and Amphibian Expo and at the opening of Coffee Creek Nature Center in Chesterton, Indiana. Steve Spitzer and Calvin Barron will be participating in "Snakes Alive" a program held at the Chicago Public Library on July 17, 1999. Jack Schoenfelder reminded the board that appropriate signage should be posted at all shows to identify the CHS to all attendees.

Library: Jennie Picciola and Jenny Vollman will get together to switch the member's library holdings to a newer cart for easier mobility and viewing at the general meetings.

Nominating Committee: The nominating committee is now complete with the appointment of nonboard members Joan Moore, Bob Bavirsha and Brian Jones. The full committee also includes board members Karen Bielski and Don Wheeler. ReptileFest: Plans for the Y2K ReptileFest are in the works. The ReptileFest '99 exit meeting will be held at Jennie Picciola's house on Saturday, July 17, at 3 P.M. Lori announced that the board and the ReptileFest committee have been invited to attend a tour of Paul Sereno's paleontology lab at the University of Chicago on Wednesday, July 21, at 7 P.M. Directions on when and where to meet were distributed.

Old Business

Lori King presented a CHS website update from the new webmaster Marcia Rybak. The update lists accomplishments and projections for next month along with a printout of the homepage. The board voted unanimously in favor of authorizing Ms. Rybak to negotiate pricing activities as per her projections for the website. Any agreements resulting from such discussions will be subject to board approval. Jack Schoenfelder discussed meeting IRS requirements for nonprofit entities by posting the last three years tax returns (990 forms) on the CHS website. He will also include the letter from the IRS indicating that the CHS is a non-profit 501(c)3 organization. Jack will get in touch with the webmaster to follow through.

New Business

The board received a resignation letter from President Audrey Vanderlinden. The board voted unanimously to accept her resignation.

The acting President and current Vice President Mike Dloogatch appointed Jack Schoenfelder to the office of President. This appointment is pro-tem. It was approved unanimously by the board and is subject to ratification by the general membership at the next general meeting.

The other vacant board position, Publications Secretary, was filled as well. The board appointed Marcia Rybak to that position for the remainder of the year. The vote was 7 in favor with 1 abstention. This appointment is also subject to the ratification of the general membership at the next general meeting.

Lori King reported that she had spoken with a representative from the Chicago Academy of Sciences regarding future plans and collaborations between our organization and the CAS including the opening festivities for their new museum.

A brief discussion of the 2001 Midwest Herpetological Symposium to be hosted by the CHS took place.

Board meeting locations were discussed. It was agreed that Steve Spitzer would check into our current venue and put together a tentative list of Y2K BOD meeting dates subject to board approval.

Round Table

Steve Spitzer informed the board of a voice mail message regarding an alleged alligator in a cemetery pond. He also told Jack Schoenfelder that it was "good to have him back."

Mike Dloogatch mentioned that he would like to see some of the policies instituted by our former President continued in her absence. Gary Fogel volunteered to continue bringing publications for the reading table to future meetings. We will also keep the Q&A session at the beginning of the business meeting.

Jack Schoenfelder thanked the board members for their confidence in appointing him to the Presidency and gave the BOD his contact information.

The meeting adjourned at 9:30 P.M.

Respectfully submitted by Member-at-large Jennie Picciola for Recording Secretary Karen Bielski

Advertisements

American Federation of Herpetoculturists: A nonprofit national membership organization of herpetoculturists, veterinarians, academicians and zoo personnel involved in the captive husbandry and propagation of amphibians and reptiles. Membership includes highly acclaimed magazine, *The Vivarium*, dedicated to dissemination of information on herpetocultural accomplishments, herp medicine, breeding and maintenance, field studies and adventures, enclosure design and much more. AFH membership is $26. Send information requests to: AFH-News, P.O. Box 300067, Escondido CA 92030-0067.

For sale: rats and mice—pinkies, fuzzies and adults. Quantity discounts. Please send a SASE for pricelist or call Bill Brant, *THE GOURMET RODENT*, 6115 SW 137th Avenue, Archer FL 32618, (352) 495-9024, E-mail <GrmtRodent@aol.com>.

For sale: murine-pathogen-free rats and mice available in all sizes, live or frozen: pinkies, fuzzies, crawlers, small, medium and large. Frozen crawler mice in lots of 2000, $.17 each. Also available, full grown hairless mice. FOB shipping point. Master Card accepted. Call (518) 537-2000 between 8:00 A.M. and 5:00 P.M. or write SAS Corporation, 273 Hover Avenue, Germantown NY 12526 for prices and additional information.

For sale: from **The Mouse Factory**, producing superior quality, frozen feeder mice and rats. New prices, new sizes, and now rats! Our mice and rats are vacuum-packed to greatly extend freezer life by reducing freezer burning and preserving vitamin and nutrient content. We feed our colony a nutrtionally balanced diet of rodent chow, formulated especially for us, and four types of natural whole grains and seeds. Mice: pinkies, $.25; fuzzies, $.30; hoppers, $.35; weanling, $.40; adult, $.45. Rats: starting with pinks at $.40 each, to XL at $1.80 each. Discount prices available. We accept Visa, MC, Discover or money orders. P.O. Box 85, Alpine TX 79831. Call us toll-free at (800) 720-0076 or visit our web site <www.themousefactory.com>.

For sale: from Bayou Rodents, excellent quality feeder mice and rats. Every size available. Pinks starting at $20/100. Orders are shipped by overnight service Monday thru Thursday. We accept Visa, MasterCard and Discover. For more info, contact Rhonda or Peggy, (800) 722-6102.

For sale: **high quality frozen feeders**. Over a decade of production and supply. Seven sizes of mice availabe: small newborn pinks up to jumbo adults. Prices start at $25 per 100. Feeders are separate in the resealable bag, not frozen together. Low shipping rates. Free price list. Kelly Haller, 4236 SE 25th Street, Topeka KS 66605, (913) 234-3358 evenings and weekends.

For sale: Herp bags—colors vary, translucent ripcord nylon, super lightweight, extremely durable construction with hot corners sewn in, double seamed. Custom sizes made upon request. Sizes: 46" × 14", $7 each; 24" × 12", $6 each; 24" × 6", $5 each. Shipping fees, $1 for first bag, $.30 each additional bag. Nicole Lechowicz, 2511 S. Illinois Avenue, #104, Carbondale IL 62901, (618) 457-2783.

For sale: 2-year-old c.b. Moroccan uromastyx, female, very healthy, 9" head to tail. Ross or Laura, (847) 328-8175.

For sale: c.b. geckos. One male *Rhacodactylus chahoua*, nice colors and pattern, perfect shape, $800; one male and one female *Rhacodactylus auriculatus*, adult breeders, normal banded pattern with pink color scales, have laid two clutches this year, $475/pair; two male and five female *Stenodactylus doriae*, breeding group, similar in shape and size to *Teratoscincus microlepis*, but with small white spots over the back, all in perfect shape, $45 each or $300/group. This year's c.b. offspring available now: *Rhacodactylus auriculatus* (European bloodlines), $125 each; *Bavayia cyclura*, $65 each; *Oedura monilis* (high yellow phase), $75 each; *Geckolepis typica*, $35 each; *Teratoscincus roborowski*, little butterballs!, $95 each; *Palmatogecko rangei*, several bloodlines, $150 each; *Teratolepis fasciata*, nice patterns, $95 each; *Phelsuma madagscariensis boehmei*, rare, very colorful, $75 each; *Phelsuma standingi*, adult breeding female bright blue!, $70 each. Send SASE for current 1999 stock list. Philip Tremper, P.O. Box 264, Clintonville WI 54929, (715) 823-5873 phone/fax. E-mail: <geckoandco@hotmail.com>. Check out our new website at www.kingsnake.com/philtremper.

For sale: yearling argus monitor, $175; albino eastern kingsnake (*Lampropeltis g. getula*), $300; yearling black-tailed cribo, $200; young, red, Colombian boa, $50; assorted sizes, colors, sexes Mali uromastyx, LTC, $60–75; yearling Moroccan uromastyx, $125; LTC male chuckwalla, $60; two adult male locality rosy boas, $50 and $75. Mike Malawy, (630) 717-9955 evenings and weekends, E-mail: <mike@herpworld.com>.

For sale: '99 c.b. hatchling snakes. Yunnan beauty, $50; Huachuca mountain kings (*woodini*), $90; Sinaloan milks, $50; Leonis kings (*thayeri*), $75. Above prices are per each, some quantity discounting available. Henry Cohen, 24 St. Johns Place, Buffalo NY 14201, (716) 881-6724.

For sale: Now accepting reservations for the following 1999 expected offspring. **Snow plains garter** (*Thamnophis radix*), this will be the first year that these are produced and will be very limited numbers, $225–300 each; **double hetero plains garter** (anerythristic × albino), statistically offspring will include albino, anerythristic, snow, heteros and normals, $175 each; **anerythristic plains garter**, dark black with gray dorsal stripe and blue venter (two possible bloodlines), $100–125 each; **albino plains garter**, classic lavender/white, similar to California king, $125–150 each; **possible hetero plains**, these will be offspring of the albino × anerythristic cross, possibly hetero for albino, anerythristic and snow, $30 each; **Blais red eastern garter** (*T. s. sirtalis*), photos in *Vivarium*, Vol. 9, No. 6, pp. 12-13, these are gorgeous, varying degrees of high red markings and sure to be popular, $50–125 each; **double hetero Blais red eastern × albino Florida**, this will produce a stunning, robust red albino and will be extremely popular for years to come, $95 each; **melanistic eastern garter**, classic midnight black with white chin, copy of permit provided upon request, $25 each; **hetero anerythristic red-sided** (*T. s. parietalis*), exciting, one-of-a-kind new morph, charcoal black with gray dorsal stripe and white fleckings throughout body, $100 each. **All of my garter snakes eat mice and it is generally easy to convert babies to rodents**. For reservations, contact Scott Felzer, (919) 934-0110 Eastern Time or E-mail: <sirtalis01@aol.com>. [NC]

For sale: c.b. **Vietnamese blue beauties**, unrelated bloodlines, $500/pair; c.b. **Amazon tree boas**, $50–200; **Sawu pythons**, adult pair, $450. Mike, (708) 385-0543. Chicagoland area. E-mail: <Boakingdom@aol.com>.

For sale: **Adults:** male het ghost, $60; black king, $55; male *thayeri* (milksnake phase), $100; pair of ball pythons, $175/pair; Indonesian bluetongue, $55; *Rhacodactylus auriculatus*, c.b. '98, $150; *Phelsuma madagascariensis grandis*, c.b. '98, $20. Flexwatt heat tape, $2.50/ft, $5 each connection. Steve Bostwick (515) 274-4580, E-mail <liasis@juno.com>. [IA]

For sale: Great snakes, great service. Send SASE for list. Applegate, P.O. Box 338, Campo CA 91906, (619) 478-5123. E-mail: <applesnake@juno.com>. Website: <www.applegatereptiles.com> Thank you, call me.

For sale: **1999 prospective hatchlings**: Baird's ratsnakes, $15 each; prairie kingsnakes, $15 each; California kingsnakes, $20 each; speckled kingsnakes, $15 each; albino speckled kingsnakes, $25 each; Mexican black kingsnakes, $30 each; red milksnakes, $30 each; Sinaloan milksnakes, $35 each; Pueblan milksnakes, $35 each; Mexican milksnakes, $40 each; Queretaro or Ruthven's kingsnakes, $50 each; Nuevo Léon kingsnakes (*thayeri*), $65 each; gray-banded kingsnakes, $50 each; Durango mountain kingsnakes (*greeri*), $75 each; Arizona mountain kingsnakes, $125 each; prairie/speckled crosses, $20 each. **Breeders, available May–June:** one male and one female Baird's ratsnakes, $100; one male and one female *annulata*, $200; one male and two female prairie kings, $135; one male and one female albino speckled kings, $150; one male and one female Mexican black kings, $175; one male and three female red milksnakes, $250; two female Sinaloan milksnakes, $175; one male and two female Pueblan milksnakes, $250; one male and one female Ruthven's kingsnakes, $250; one male and one female Nuevo Léon kingsnakes (*thayeri*), $250; one male and two female Durango mountain kingsnakes, $300; one male and one female *mexicana mexicana*, $135; two male and two female prairie/speckled crosses, $85/pair; one male and two female California kings, $150. Steve Mitchener, (405) 748-6566 after 6:00 P.M. Central Time. [OK]

Advertisements (cont'd)

For sale: **Argentine boa babies!** Gorgeous, healthy, feeding. From exceptional parents. Also available **northern blue tongue skink babies!** Very vigorous, eating. From colorful parents. And do we have the **bullsnakes! Snows, hypomelanistic, albino**, you name it, we have the morph! They are eating us out of house and home! Call Jim at (414) 654-6303.

For sale: yellow anacondas, c.b. 6/99 from 10' docile female, bright yellow with solid black spots, great eaters, $100 each; male jungle carpet python, stunning 2-year-old, "Lazik" bloodline, $250; black & white banded Cal. kings, $25; 50/50 high white Cal. kings, $50. Mark Petros, Strictly Serpents, (847) 854-3259 home, (847) 854-2992 work.

For sale: Send SASE to CRC, P.O. Box 0731, Las Vegas NV 89125-0731 for brochures and list of species available. Limited bookings available for guided tours of herpetological collection sites in Nevada. Call/fax (702) 450-0065. URL <http://www.herp.com/crc/> E-mail <crcsafetie@aol.com>.

Free to good home: female Honduran milksnake. Brian, (773) 725-7515.

Tours: Adventure tours to Madagascar! Join **Bill Love** seeing and photographing fauna and flora, heavily herp-biased, across the world's least known mini-continent. Maximum fun & photo ops assured on every trip. Contact him at: BLUE CHAMELEON VENTURES, P.O. Box 643, Alva FL 33920. TEL: (941) 728-2390, FAX: (941) 728-3276, E-MAIL: <blove@cyberstreet.com>.

Tours: **Road-riding in Costa Rica!** Treat yourself to the trip of a lifetime! Learn about tropical herps, find them, photograph them, see where they live. **Greentracks, Inc.**, offers the best herpetological tours led by internationally acclaimed herpetologists and herpetoculturists. See the Amazon, visit cloud forests, experience the world's greatest rainforest, super sunsets and good company. Call (800) 9-MONKEY.

Video: *Rattlesnake Hunting*, a 60-minute video by a 30-year veteran collector. Don't miss this one! It's as close to being in the field as you can get. (Not a slick commercial production.) Send check or money order for $19.95 plus $3 postage & handling to: D. Wheeler, 2705 Sunset Trail, Riverwoods IL 60015. Allow 4–6 weeks for delivery.

Wanted: Any information about flying snakes (*Chrysopelea*), including natural history, care and anecdotes. I'm conducting research on their flight at the University of Chicago. Jake Socha, (773) 324-4010, E-mail: <jjsocha@midway.uchicago.edu>.

Wanted: aberrant/unusual garter snakes. Scott Felzer, (919) 934-0110. [NC]

Wanted: big-headed turtles; mata mata turtles; Mexican giant mud turtles (*Staurotypus triporcatus*); exceptionally large common snappers (45 lbs. & up); large alligator snappers (over 90 lbs.); spectacled caiman from Trinidad, Tobago and Surinam; dwarf caiman; smooth-fronted caiman; albino turtles (except red-eared sliders). Walt Loose, (610) 926-6028, 9:00 A.M. – 1:00 P.M. or after 11:30 P.M. Eastern Time.

Line ads in this publication are run free for CHS members — $2 per line for nonmembers. Any ad may be refused at the discretion of the Editor. Submit ads to: Michael Dloogatch, 6048 N. Lawndale Avenue, Chicago IL 60659, (773) 588-0728 evening telephone, (312) 782-2868 fax, E-mail <MADadder0@aol.com>.

News and Announcements

NEW PUBLICATION FROM THE HERPETOLOGISTS' LEAGUE

The Herpetologists' League is pleased to anounce the publication of *Snake Species of the World. A Taxonomic and Geographic Reference. Volume 1* by Roy W. McDiarmid, Jonathan A. Campbell and T'Shaka A. Toure. *Snake Species of the World* is published by the Herpetologists' League and distributed by EIS Publishing.

As a comprehensive catalogue of the snakes of the world, this series of three printed volumes will provide an inclusive treatment of some 18 families, 464 genera, and more than 2,700 species of living snakes. Inclusive information is arranged alphabetically within each family unit and consists of family, subfamily, genus, and species accounts. When complete, *Snake Species of the World* will update the last comprehensive treatment of snakes that was published by G. A. Boulenger, 1893-1896, *Catalogue of the Snakes in the British Museum (Natural History)*.

This first volume covers 681 species distributed among 15 families, as follows: **Scolecophidia:** Leptotyphlopidae, Anomolepidae, and Typhlopidae; **Alethinophidia:** Anomochilidae, Uropeltidae, Cylindrophiidae, Aniliidae; **Macrostomata:** Xenopeltidae, Loxocemidae, Pythonidae, Boidae (Boinae, Erycinae), Bolyeriidae, Tropidophiidae; and **Caenophidia:** Acrochoridae and Colubroidea Viperidae (Azemiopinae, Causinae, Crotalinae, Viperinae). The 266 generic names are organized into 80 generic accounts, and the 4,288 species names into 681 species accounts. These totals are distributed among 21 recognized family groups for the 111 published names.

The price for volume 1 is $80.00 US. To learn more about this book, go to its web site <http://www.nearctica.com/nathist/reptile/list.htm> or to get a brochure, write to: EIS, P.O. Box 4350, Rockville, MD 20849-4350, USA.

UPCOMING MEETINGS

The next meeting of the Chicago Herpetological Society will be held at 7:30 P.M., Wednesday, August 25, at the Field Museum of Natural History, Roosevelt Road at Lake Shore Drive, in Chicago. As of this writing a speaker has not yet been scheduled, but you can be sure that we will have our usual fine program.

We are required to use the entrance on the west side of the museum. **We are allowed to use the free parking lot to the west of the museum. Entrance to this lot is from McFetridge Drive, the wide street just to the south, between the museum and Soldier Field.** Public transportation is an option: the Roosevelt Road (12th Street) bus goes directly to the museum, thus providing a connection with the el and subway. This bus service runs until 11 P.M.

The Chicago Turtle Club

The Chicago Turtle Club will meet on Sunday, August 22, 1:00 – 3:30/4:00 P.M., at the North Park Village Nature Center, 5801 N. Pulaski, in Chicago. Meetings are informal. Questions, children and animals are welcome. Parking is free and there is no admission. For more information call Lisa, (773) 508-0034 or visit the CTC web site: <http://www.geocities.com/~chicagoturtle>.

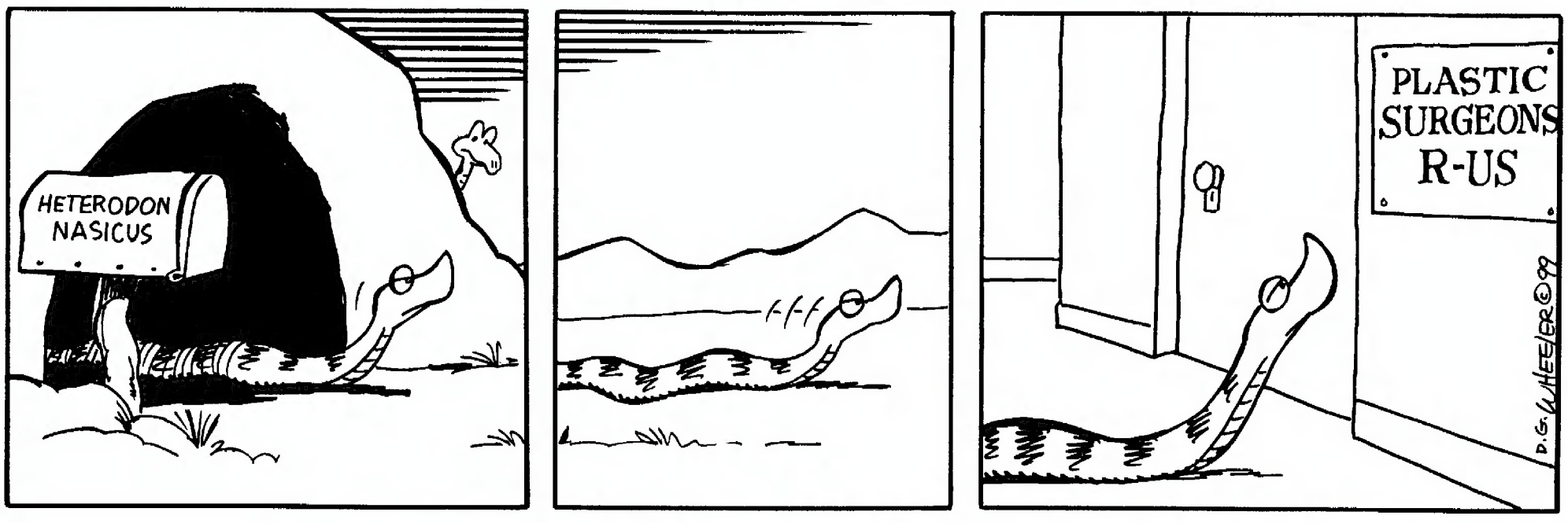
1999 CHS PICNIC

This summer we are once again holding a CHS Picnic. The date is Sunday, August 22, and the location is the Catherine Chevalier Woods out near O'Hare Airport at East River Road/Dee Road and Bryn Mawr Avenue (exit the Kennedy Expressway at Cumberland, go south to Bryn Mawr, then west to East River Road). The action will start at Noon and last until everyone goes home. The CHS will provide grills and sodas/soft drinks; you bring your own food. We'll have the usual assortment of games and activities planned for kids and adults. For more details, call Mike Dloogatch, (773) 588-0728.

MOVING??

Please let us know in plenty of time of any change in your mailing address. The *Bulletin of the Chicago Herpetological Society* is sent to our U.S. members by bulk-rate third class mail. This means that the U.S. Post Office will not forward your *Bulletin* with the rest of your mail. This is so even if you make a special request that your magazines be forwarded (such a request only applies to second class mail).

THE ADVENTURES OF SPOT



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